GXR

GXR Series

# Subwoofers

polkaudio
the speaker specialists®

# GXR

# owner's Manual


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CE

ATTACH YOUR RECEIPT
HERE AND FILE FOR
FUTURE REFERENCE
X

## BRING ON THE NOIZE!

Please inspect each loudspeaker carefully. Notify your Polk Audio dealer if you notice any damage or missing items. Keep the carton and packing material. They will do the best job of protecting your speakers if they need to be transported.

## BUILDING A HOME FOR YOUR SUBWOOFER—GXR SUB ENCLOSURE 101

To get the best performance from your GXR Subwoofers, you must use a Subwoofer Enclosure. Don't bother using them in "free air," with no sub box, just popped into the back deck of your car. You will not get very good performance from your subwoofers if you do this.

You can build your own box, buy a pre-built box or a box kit, or have your Polk Audio dealer design and build a custom sub enclosure for you. Your GXR Subwoofers were designed to work well in a wide variety of enclosure sizes and configurations.

If you choose to build your own enclosure, be sure to build it well. Make certain it's properly sealed and airtight for maximum bass performance.

## RECOMMENDED QUICK FIT ENCLOSURES

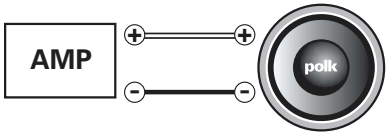
GXR104— .65 to 1.0 cu. ft. sealed
GXR124— .85 to 1.25 cu. ft. sealed

**For more information about enclosures and configurations, log on to http://www.polkaudio.com/car/toolbox/subboxplans/ or call Polk Audio's Customer Service Department for a FAXback Sub Enclosure info sheet.**

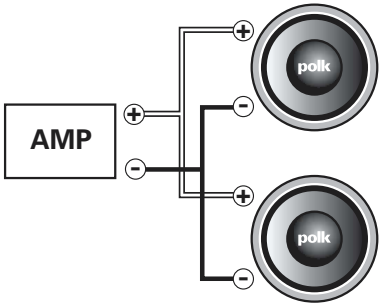
**Polk Audio Customer Service is available from 9am–6pm, EST, Monday through Friday, at 800-377-7655 (US & Can only, outside the US please call 410-358-3600). Please do not hesitate to call us if you have questions about your speaker system. We love this stuff.**

## WIRING DIAGRAMS FOR GXR104-4Ω AND GXR124-4Ω

Please make certain that your amplifier is rated to carry the specified load.




**Single 4Ω wiring.**




**With speakers wired in parallel:**
**Two 4Ω speakers will present a 2Ω load.**
**Make sure that your amplifier is 2Ω stable when configured in the bridge mode. Consult your amplifier owners manual before wiring in this configuration.**

## BREAK IT IN.

GXR Subwoofers will achieve even greater performance once they are thoroughly broken-in. To break in your new GXR Subs, play 20 to 30 hours of music at moderate levels.

## GET MORE INFORMATION ONLINE AT POLK UNIVERSITY:

http://www.polkaudio.com/car/faqad/index.php

## AMPLIFIER POWER REQUIREMENTS FOR GXR SUBWOOFERS

Your Subwoofers will work well with a variety of electronic components. As little as 50 watts per channel will deliver adequate listening levels in most cars. If you have a noisy car or intend to play your system at loud listening levels, more power is necessary to achieve the best performance. More power is always better. Consult your Polk Audio dealer for specific recommendations.

## OPTIMAL CROSSOVER SETTING

We recommend using an active crossover with a 12 to 18dB per octave low pass filter slope, and setting it to an initial setting of 80 to 90Hz as a good starting point. This is an optimal crossover setting on most vehicles.

## INVERTING PHASE

Depending on the placement of your subwoofer enclosure and associated components, it may be necessary to invert the phase of one or another of your system's connections in order to gain better subwoofer/mid-range blending. Inverting the phase simply means switching the positive connections with the negative connections at the amplifier. If you choose to do this, invert the phase of only one set of speakers (either your mains, or your subs, never both).

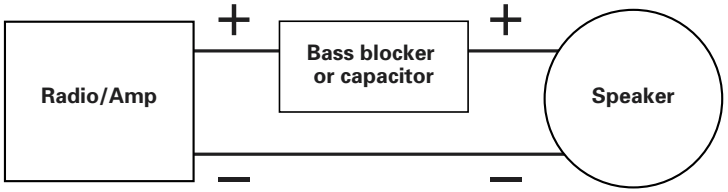


## SAFE LIMITS OF OPERATION

Your Polk GXR Subwoofers are made with the highest quality materials for years of trouble-free performance. However, damage to loudspeakers can occur when an amplifier, regardless of its wattage, is made to play at higher listening levels than its power can clearly produce (usually beyond the "1 to 2 o'clock" position on the volume control). This results in very high levels of audible distortion, originating in the amplifier, which adds a harsh, gritty sound to the music. Contrary to popular belief, a speaker is more likely to be damaged by trying to get too much volume from a low-powered amp than from a high-powered one. Hear distortion? Turn it down. Contact Polk Customer Service 800-377-7655 (9am–6pm, EST, Monday through Friday).

## LOW FREQUENCY CUT-OFF FOR MID-RANGE SPEAKERS IN SYSTEMS WITH SUBWOOFERS

Now that you have a subwoofer in your system, you may want to decrease the amount of bass going to your mid-range speakers. This will get you better mid-range sound and increase the power handling. There are two ways to roll off the bass before it gets to your mid-range speakers. One way is to use a "bass blocker," a capacitor placed in series with the speaker input. Bass blockers are installed in series, one end connected with the positive lead from your amplifier and the other end connected to the positive lead of each of your speakers. Bass blocker capacitors (200 microfarad @ 100volts, non-polarized) are available at any RadioShack or parts supply house. The other route is to use an electronic crossover device that allows filtering below 100Hz or so. Find these devices at your authorized Polk Audio dealer.




## TECHNICAL ASSISTANCE OR SERVICE "NO SOUND?"

If, after following these hookup and installation directions, you experience difficulty, please double-check all wire connections.

Make certain your electronic equipment is operating correctly by hooking up another speaker to the speaker output. For example, if you are not getting sound from the left channel speaker, connect the right channel speaker to the left output. If you still get no sound from that side, the problem is in your amp or source electronics. Should you isolate the problem to the speaker, contact the authorized Polk Audio dealer where you bought your speakers. Authorized Polk Audio dealers are the best source for advice and assistance.

Polk Audio's Customer Service Department is available from 9am–6pm, EST, Monday through Friday, at 800-377-7655 (US & Can only, outside the US call 410-358-3600). Please do not hesitate to call us if you have questions about your speaker system.

**You will find additional information, informative articles, manual updates and cool stuff to buy that has "Polk Audio" all over it by visiting www.polkaudio.com.**

## GXR SERIES SUBWOOFER SPECIFICATIONS

| | GXR104 | GXR124 |
|---|---|---|
| *Thiele/Small Parameters* | | |
| Type | subwoofer | subwoofer |
| Driver Complement | 10" (254mm) | 12" (304.8mm) |
| Nominal Impedance | 4Ω | 4Ω |
| Frequency Response | 29-400Hz | 25-400Hz |
| Fs (Hz) | 34.37Hz | 25.91Hz |
| Re | 3.30Ω | 3.81Ω |
| Le | 0.97mH | 1.32mH |
| Qms | 7.0 | 7.75 |
| Qes | 0.53 | 0.50 |
| Qts | 0.49 | 0.47 |
| Vas | 2.31$ft^3$ (65.57L) | 4.83$ft^3$ (136.86L) |
| SD | 53.69$in^2$ (346$cm^2$) | 82.29$in^2$ (530.93$cm^2$) |
| Power Handling (watts continuous) | 165watts | 165watts |
| Power Handling (watts peak) | 365watts | 365watts |
| Sensitivity (SPL at 1 watt / 1 meter) | 89dB | 90dB |
| Xmax | 0.24" (6.1mm) | 0.24" (6.1mm) |
| Voicecoil Diameter | 1.5" (38.1mm) | 1.5" (38.1mm) |
| Mounting Depth Top Mount | 4 1/2" (115mm) | 5 1/4" (133mm) |
| Mounting Depth Bottom Mount | 5" (126mm) | 5 5/8" (144mm) |
| Mounting Diameter | 9 3/16" (233mm) | 11" (279mm) |



## GXR SUBWOOFER 1 YEAR WARRANTY

Polk Audio, Inc. warrants the original purchaser only that this Polk Audio GXR Series Product (the Product) will be free from defects in materials and workmanship for a period of (1) one year from the date of original retail purchase from a Polk Audio Authorized Dealer. However, this warranty will automatically terminate prior to the expiration of the (1) one year period if the original retail purchaser sells or otherwise transfers the Product to any other party. The original retail purchaser shall herein after be referred to as "you." To allow Polk Audio to offer the best possible warranty service, please fill out the Product Registration Card(s) and send them to the Factory at the address provided in the Registration Card within (10) ten days of the date of purchase.

Defective Products must be shipped, together with a proof of purchase, prepaid insured to the Authorized Polk Audio Dealer from whom you purchased the Product, or to Polk Audio, 2550 Brittania Blvd., Suite D, San Diego, CA 92154. Products must be shipped in the original shipping container or its equivalent; in any case the risk of loss or damage in transit is to be borne by you. If, upon examination at the Factory or Polk Audio Authorized Dealer it is determined that the unit was defective in materials or workmanship at any time during the Warranty period, Polk Audio or the Polk Audio Dealer will, at its option, repair or replace this Product at no additional charge, except as set forth below. All replaced parts and Products become property of Polk Audio. Products replaced or repaired under this Warranty will be returned to you, within a reasonable time, freight prepaid.

This Warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage inputs in excess of the rated maximum of the unit, cosmetic appearance of the cabinetry not directly attributable to defects in materials or workmanship, or service, repair, or modifications of the Product which has not been authorized or approved by Polk Audio.

This Warranty is in lieu of all other expressed Warranties. If this Product is defective in materials and workmanship as warranted above, your sole remedy shall be repair or replacement as provided above. In no event will Polk Audio, Inc. be liable to you for any incidental or consequential damages arising out of the use or inability to use the Product, even if Polk Audio, Inc. or a Polk Audio Dealer has been advised of the possibility of such damages, or any other claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply to you. This Warranty gives you specific legal rights which may vary from state to state.

This warranty applies only to Products purchased in the United States of America, its possessions, and U.S. and NATO armed forces exchanges and audio clubs. The Warranty terms and conditions applicable to Products purchased in other countries are available from the Polk Audio Authorized Distributors in such countries.